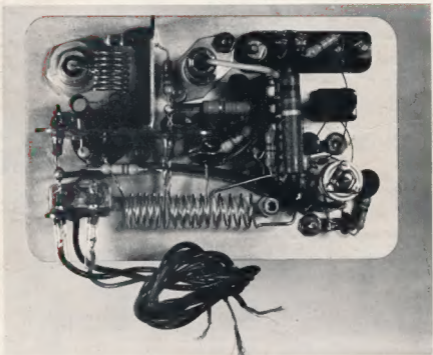


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NOVEMBER 1962



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OUR COVER

The under-chassis view of the Simplified High-Performance Two-Metre Converter, the technical article of which commences on page 2.

FEDERAL COMMENT

★

YOUTH RADIO CLUBS

In recent years, membership of the Divisions of the Institute has grown at a lower rate than the overall growth of licensees in the Commonwealth. Several Divisions, but notably the New South Wales Division, has always possessed a good number of associate members to swell their total membership. This has not occurred by accident, but by a continuing process of encouraging new blood into W.I.A. affairs.

It has been the policy of the Institute for a number of years to form clubs in appropriate centres—say in Police Boys' Clubs and the Boy Scouts' Organisation—to create interest in Amateur Radio among the youth of the nation. At the Convention in Perth earlier this year, the New South Wales Division put forward detailed plans for the formation of radio clubs in schools, particularly high schools. The plan suggested taking the young enthusiasts through a series of proficiency tests with merit certificates awarded at each stage of their advancement in Amateur Radio.

Federal Council agreed that this plan should be implemented in all Divisions at the earliest possible time, and to this end, the N.S.W. Division has since supplied the full details to each Division for their use. The highest praise must be given to the N.S.W. Division for their great effort which has already been discussed with and accepted by the Education Department in their State. There are already a number of such radio clubs functioning in New South Wales, under the Division's guidance, and even at this early stage in their development, are achieving outstanding results.

The technological advantages of such a nation-wide plan are obvious and should on this account alone receive the fullest co-operation of Government authorities; but perhaps a less obvious advantage is the sociological aspect of the scheme. The promotion of a healthy interest in a worthwhile hobby such as Amateur Radio must eventually have some effect to lower a growing delinquency rate, and in this sense, receive even greater support from everyone interested in the future welfare of our younger generation.

It is therefore with the strongest possible motives that we urge every Division to put this scheme into operation immediately—there are many organisations available apart from high schools who would no doubt welcome such a plan—and promote activity by the formation of special groups if necessary to handle the programme. In the meantime, the Federal Executive is already pursuing this matter and you will hear more of this in the ensuing months. The culmination of a united effort by Divisions will not only be to assist the nation in a technological and sociological way but to indirectly help the W.I.A. in the resulting membership increase.

FEDERAL EXECUTIVE, W.I.A.

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Simplified High-Performance Two-Metre Converter

W. M. RICE,* VK3ABP

THIS converter has been developed in several respects from that described by the VK2 V.h.f. Group some years ago in "Radio, Television and Hobbies" and usually referred to (in VK3 anyway) as the "R. & H. Converter". However, with apologies to its originators, I feel it has been improved a good deal by re-design along the following lines:—

- (1) Smaller chassis ($3\frac{1}{2} \times 5"$ minimum).
- (2) Much simpler shielding layout.
- (3) No "hot" feedthroughs or components above chassis.
- (4) 6ES8 r.f. stage in series cascode (saves h.t. current).
- (5) Oscillator inductively coupled into mixer circuit.

The circuit of the converter is shown in Fig. 1. Apart from the inductive coupling, other points are the use of neutralising on the r.f. stage grounded cathode section (as in the original converter), but being a series cascode circuit the adjustment of neutralisation is rather different.

The inductive feedback type of overtone oscillator is retained, although I have heard of quite a few constructors having trouble here with the original circuit and changing it to the "Robert Dollar" type. Please yourself on this point, but the original circuit has functioned perfectly in at least half a dozen converters with which I am acquainted.

CONSTRUCTIONAL DETAILS

Much of the layout of the converter will be apparent from the under chassis photograph (Fig. 2), while the side view (Fig. 3) shows the top chassis arrangement. An aluminium chassis is satisfactory, as no soldering to it is necessary.

The layout is not very critical apart from r.f. and mixer socket orientation and placement of some of the by-passes. The mixer socket is right in the centre of the chassis, while the r.f. stage is on the longitudinal centre line and about $1\frac{1}{2}"$ centre to centre spacing from the mixer. A shield $1\frac{1}{2}"$ deep (ordinary tin-plate is quite satisfactory) runs across the centre of the r.f. socket and ends at the centre spigot of the mixer socket. It is soldered to the centre spigots of both sockets and suitably notched so that its edge butts against the chassis surface.

Solder lug under the socket mounting nuts (or brackets bent out from the shield edge) provide earthing for the shield at both sides of the r.f. socket and one side of the mixer socket. Slots cut in the shield accommodate pins 4 and 9 of the r.f. socket and pin 4 of the mixer socket, these pin contacts being soldered to the shield.

A feedthrough capacitor close to the outer side of the r.f. socket takes heater voltage through to pin 5 on the r.f. socket, while a $\frac{1}{4}"$ hole in the shield permits L3 (inside a spaghetti sleeve) to pass through from pin 6 to pin 3.

* 54 Maidstone St., Altona, W.36, Victoria.

• Here is a unit to suit the Amateur who needs a converter. The article and photos will assist to make construction simple.

Another shield at right angles to the first helps to enclose the aerial coil L1, and just to the right of the shield junction (in the photograph) are the two feedthroughs (one above the other) which anchor the "earthy" ends of L4 and L5; the L5 feedthrough being nearer the chassis.

Placement of other parts is "according to taste" providing that pin 6 of the oscillator socket is conveniently handy

throughs should not obstruct access with a tuning wand to the end of the interstage coils L4 and L5. Clearance should be allowed around the chassis edges to fit the whole unit into a shallow box— $1\frac{1}{2}"$ is suggested as a suitable depth, as this will then just clear the Philips trimmer, which is the item projecting farthest beneath the chassis.

ALIGNMENT

If the coils are all wound exactly to the specifications of Table 1 the converter should perform reasonably well with only two adjustments. The 3-30 pF. trimmer is set to the third overtone (as evidenced by a drop in h.t. current and a rise in noise output from the i.f.

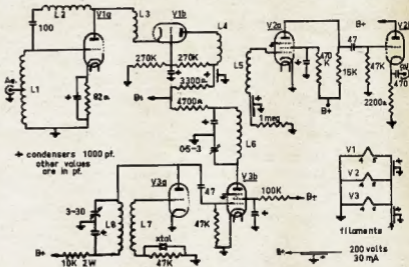


Fig. 1.—Circuit of the Two-Metre Converter.

V1, 6ES8, cascode r.f.; V2, 6BL6, mixer-cathode follower; V3, 6BL6, osc. multiplier.

to the end of the multiplier output coil L6. The 0.5-3 pF. ceramic trimmer must also be close to pin 6.

A six-lug tag strip runs across the chassis between oscillator and mixer sockets, a free lug at the oscillator end providing a tie point for the h.t. end of L6, which should be by-passed back to pin 7 or 8 and thence to earth via a solder lug under the socket mounting nut.

The screen by-pass on V3 goes to a lug under the adjacent mounting nut. All other by-passes connect either to the appropriate socket centre or the tin shields, using the shortest possible leads.

The 3-30 pF. Philips trimmer (oscillator plate circuit) has its spindle soldered to the centre spigot of the oscillator socket (which is of course earthed).

One final point, not too well observed in the unit photographed, is that the bracket carrying the lower input feed-

receiver) and the ceramic trimmer is then peaked for maximum noise output, i.e. maximum oscillator injection at the required frequency.

The recommended i.f. is anywhere from 2 Mc. up to perhaps 20 or so (depending on the receiver used to tune it). The converter illustrated (and several others) uses a 7890 Kc. crystal (a popular disposals frequency) which on the sixth harmonic of its third overtone comes out at a shade over 142 Mc., converting 144 to 148 Mc. to an i.f. of just under 2 to 6 Mc. Alternative crystals for other i.f.s. are listed in Table 2.

More refined alignment checks may be carried out once a 2 metre signal has been located. Use a tuning wand (one end iron slug, other end brass) to establish whether L1, L4 or L5 need a reduction or increase in inductance to peak the signal. L1 will be found very broad, but some experimenting with the serial tapping point may be worth

while, although only a noise generator will show it usually! L4 and L5 are each fairly sharp and should be stagger tuned slightly to preserve somewhere near constant gain at least from 144 to 145.5 or 146 Mc. L3 is very broad indeed and should need no adjustment.

COIL SPECIFICATIONS

Coil	Function	Details
L1	Aerial	7 turns $\frac{1}{8}$ " diam., $\frac{1}{8}$ " long, 18 s.w.g. tinned. Tap 4 turns from earth end.
L2	Neutralising	12 turns $3/16$ " diam., 26 s.w.g. enamel, close-wound.
L3	Peaking	10 turns $\frac{1}{8}$ " diam., 26 s.w.g. enamel, close-wound.
L4	R.f. plate	6 turns $\frac{1}{8}$ " diam., $\frac{1}{8}$ " long, 18 s.w.g. tinned.
L5	Mixer grid	5 turns $\frac{1}{8}$ " diam., $\frac{1}{8}$ " long, 18 s.w.g. tinned.
L6	Multiplier plate	4 turns $\frac{1}{8}$ " diam., $\frac{1}{8}$ " long, 18 s.w.g. tinned.
L7	Osc. grid	8 turns $5/16$ " diam., 30 s.w.g. enamel, close-wound.
L8	Osc. plate	16 turns, $5/16$ " dia., 30 s.w.g. enamel, close-wound, spaced $1/16$ " from L7 on same former, with plate and grid at opposite ends.

Note: L4, L5 and L8 are mounted end to end on the same axis with about $1/16$ " spacing between adjacent ends.

Table 1.

The neutralising coil L2 will only need adjustment if you are after the best possible noise figure. Some improvement may be possible here by adjustment on a weak 2 metre signal, but a noise generator is really the only satisfactory device to ensure optimum results.

PERFORMANCE

Several of these converters have been built and checked out on good quality test equipment. Without any adjustments at all apart from the oscillator trimmers noise figures as low as 5 db. have been measured. (Noise figure is the ratio of the noise output of the device under test to the noise output of an identical but perfect device at the same temperature).

As far as 2 metre converters are concerned anything under about 8 db. is acceptable, 4 to 5 db. good, 2 db.

CRYSTAL FREQUENCIES FOR VARIOUS INTERMEDIATE FREQUENCIES

LF. for	Crystal Frequency	
	Using 3rd Overtone	Using 3rd Overtone
144 Mc.	$\times 6$	$\times 7$
2 Mc.	7889 Kc.	6762 Kc.
3 Mc.	7833 Kc.	6714 Kc.
4 Mc.	7777 Kc.	6666 Kc.
5 Mc.	7722 Kc.	6619 Kc.
6 Mc.	7666 Kc.	6571 Kc.
7 Mc.	7611 Kc.	6524 Kc.
8 Mc.	7555 Kc.	6476 Kc.
10 Mc.	7444 Kc.	6381 Kc.
12 Mc.	7333 Kc.	6286 Kc.
14 Mc.	7222 Kc.	6190 Kc.
16 Mc.	7111 Kc.	6095 Kc.

Table 2.

about the best attainable with present day valve techniques. With a "bit of fiddling" it is possible to obtain a 3 db. noise figure from this converter.

It is possible that when the r.f. stage noise figure has been optimised, the mixer noise may become the limiting factor. This seems to vary quite considerably from one 6BL8 to another, but can in any case be reduced by reducing the screen voltage, i.e. increasing the screen dropping resistor. The original VK2 converter used a 100K resistor here—this is in most cases too low. The 470K shown is a good compromise but may be increased to several megohms providing the attendant loss of gain can be tolerated.

Finally, if you have access to a good signal generator with low leakage and an accurate attenuator, you will probably find that still more external attenuation is needed to reduce the signal to an inaudible level. (A shielded room would also be required.—Ed.) On a good converter, one-tenth of a micro-volt modulated 30% should be quite a good signal. One hundredth of a micro-volt is detectable on this converter. Who could want better?

COPY DATES

Readers and Correspondents are reminded that with the approaching Xmas holidays, the following dates will apply to the December 1962 and January 1963 editions of "Amateur Radio."

All matter for inclusion, including Hamads, must be received by these dates:

December "A.R.," by 8/11/62

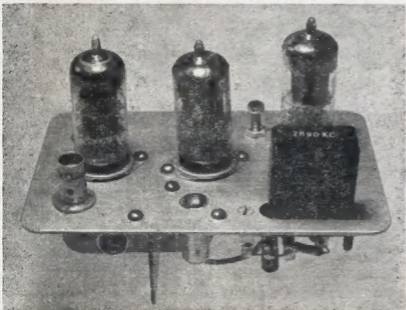
January "A.R.," by 1/12/62

Late matters will appear in February "A.R.," which will be distributed a little later in that month.

OBITUARY

T. ARTICLE

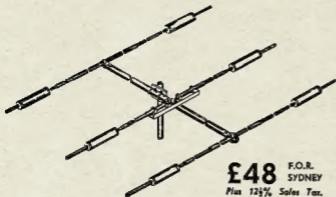
T. Article, a contemporary of Marconi, was well known throughout the Amateur world. His many contributions gave every Amateur that step towards progress. Tech, as he was known, was a prominent contributor to "A.R.," and all readers will join with the Publications Committee in regretting his passing, and hope that all Amateurs will contribute to his last offering.



Top view of the Two-Metre Converter. The under-chassis view is shown on the front cover.

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GEORGE GRAMMER, WIDF

IN Ham circles the words "transistor power supply" are usually taken to mean a modern substitute for the vibrator supply. This one isn't. It's an a.c. line powered supply for transistors.

One of the nice things about transistors is that they take so little power—easily furnished by a few flashlight cells (it says here). There are two fallacies in this pleasant theory: (1) You never have any flashlight cells when you get the urge to try a transistor circuit; or (2) you have some, but they're dead. A few of both experiences prompted the construction of the low-voltage d.c. supply shown in the photographs. Its output voltage is adjustable up to 18 volts, depending on the current demanded of it. The maximum current at 18 volts is about 30 mA., but at some lower voltages the current can be as high as one-half ampere.

THE CIRCUIT

The electronic filter circuit used by Joe Galeskie in his "Imp-TR"† appeared to answer the problem of how to get adequate hum filtering. This circuit also suggested the possibility of getting continuously-adjustable d.c. output voltage, by installing a potentiometer for setting the base bias of the filter transistor.

To save the trouble of rewinding a transformer to give some desired output voltage, a 6.3 volt filament transformer was used, along with a voltage-doubling full-wave rectifier. This on the theory that a nominal 12 volt supply would take care of nearly all requirements, since 12 volts is standard for car electrical systems.

The parts were first haywired together on the bench to see how the circuit would work. It met expectations, so the version shown was built up. The box is 5½" x 2½" x 3". Every-

thing is insulated from it, so either side of the output circuit can be grounded.

The only part of the circuit that required any special attention was the potentiometer, R1. A few measurements showed that the d.c. output voltage stayed more constant with load changes as the total resistance of R1 was made smaller. However, reducing the value of R1 also decreased the effectiveness of the electronic filter, no doubt because the RC product in the base circuit should have been kept constant. Unfortunately, getting some additional hundreds of microfarads at a 25 volt rating would have run into undesirable bulk. A value of 2,000 ohms for R1 was finally settled upon as a suitable compromise.

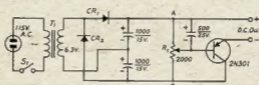


Fig. 1—Circuit of the Low-Voltage Power Supply. Capacitances are in μ F., capacitors are electrolytic. Resistance is in ohms.

CR1, CR2—Silicon, 750 mA., 50 volts or more inverse peak (1N538, etc.).
R1—3,000 ohm pot., linear taper, SI—S.p.a.t. slide switch.
T1—Filament transformer, 6.3 volt 1.2 amp.

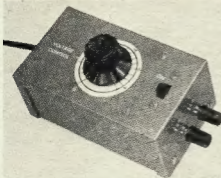
Incidentally, the transistor is not a d.c. regulator per se. The circuit does resemble the series-type regulator, but there is no stable fixed voltage to serve as a reference. Nevertheless, there is a species of d.c. regulation—enough so that the output voltage is held considerably more constant than the d.c. input voltage (between points A and B) with changes in load current. With a fixed setting of R1 in the middle range, the voltage drop is of the order of 20 percent, from zero output current to a load of around 300 mA. At light loads (up to perhaps 50 mA.) such as would be representative of most transistor circuits, the drop is under 5 percent—hardly noticeable. The d.c. could easily be regulated by using a Zener diode as a reference, but at the expense of the voltage-adjustment feature.

or less arbitrarily. It represents just detectable hum in a pair of headphones connected across the supply output terminals (with low ambient noise and a headset having reasonably good low-frequency response). This is probably a rather severe test; we haven't yet heard a trace of hum in actual use of the supply on transistor equipment. The 18-mV. curve can be taken as an "absolute" maximum, because at higher current the hum increases rapidly; the electronic filter begins to lose control above this level.

Transistor heating is the limiting factor at low output voltages. Here the collector-emitter voltage is highest, leading to maximum collector dissipation. The 2N301 is rated for a flange temperature of 80°C. A series of tests

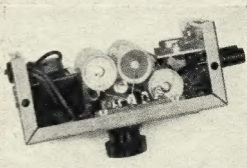
(Continued on Page 8)

* Reprinted from "QST," June 1962.
† Galeskie, "The Imp-TR," "QST," Dec. 1961.



Left: This compact unit is a battery substitute for use with transistor circuits. Output voltage is adjustable up to slightly more than 18 volts. The calibration scale shown is in terms of no-load voltage.

Right: All circuit wiring is between the points on two strips, one mounted as shown and the other in the corresponding position on the far side of the box. The two diode rectifiers can be seen below the two filter capacitors in the center; these capacitors are the 1,000 μ F. electrolytics in the voltage doubler. The filter capacitor for the transistor base is at the right. The transistor is mounted on an aluminum shelf measuring 2½ x 1½ inches, with a half-inch mounting lip bent upwards. Insulating washers are used to bolt the shelf to the side of case, since the collector is not insulated from the shelf. The binding posts are similarly insulated.



components start becoming excessively hot. A large heavy chassis helps in dissipating the heat.

GENERAL COMMENTS

A good absorption wave meter is essential. Those used here were first calibrated by Wally VK6ZAA using unbalanced gear and lechers, then when this transmitter was proved to be on frequency, it became the master standard. A process of working backwards, but at u.h.f. especially, finding the band can be a major headache if no calibrated measuring equipment is available.

Another problem is the abundance of high powered harmonics which abound. The 3/20 "tripler" gives out sufficient second harmonic—384 Mc.—to drive the p.a. grid to 0.4 mA. grid current even when the plate of the 3/20 tripler is tuned to 576 Mc. The p.a. final, tuned to 384 Mc., showed a 12% dip in final plate current. Who said that push-pull triplers did not double? In the course of adjustments to the 3/12 mentioned previously, it was accidentally made to double and drove the 3/20 tripler grid to 1.5 mA. grid current.

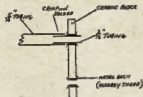


Fig. 4.—Lecher Mounting Details.

All power leads, meter leads and filament leads are run in shielded cable. The push-pull finals are not by-passed.

The end support for the lechers is ceramic block. The ones used here are from the 522 receiver tuning condenser. The c. to c. spacing of the bushed holes is the same as the c. to c. spacing of the plate pins of the 3/20s (see Fig. 4).

Frequency stability is a problem with this order of multiplication used here. The initial drift is relatively high and even after a suitable warm-up period the b.f.o. note is poor. If c.w. and narrow band l.f. strips were being used, careful consideration would have to be given to the selection of the oscillator.

POWER SUPPLIES

With an exciter chain of the size and power of the one described, the h.t. current drain is high and due consideration must be given to high current transformers and not to overloaded receiver-type transformers.

Care should be taken that the filament voltage is correct.

Actual running conditions of the original were as follows:—

5763 Osc./Tripler, 5763 Tripler

Plate voltage 295 volts
Screen voltage 240 volts
Total plate & screen current, 40 mA.
Drive to tripler, 1 mA. through 100K.

832A Tripler

Plate voltage 320 volts
Screen voltage 250 volts
Total plate & screen current, 75 mA.
Drive 2.8 mA. through 47K resistor and a 120 ohm cathode resistor.

The exciter power supply drain, 203 mA. with a h.t. voltage of 320 volts.

QQE03/20 Final

Plate voltage 250 volts
Total plate & screen current, 80 mA.
Drive up to 2.2 mA. through effectively 19.5K resistor is available.

All measurements made with an AVO Model 8 Multimeter.

EFFICIENCY

No calibrated power measuring instruments were available for direct measurements. However, by a series of empirical tests, it would appear that the output of the p.a. is of the order suggested by the manufacturers' data, i.e. about 40% (about 8 watts).

COIL DATA

- L1—23 turns of 20 s.w.g. on a 3" former with slug.
- L2—6 turns of 14 s.w.g., 3" diam. (3 turns either side of a 1" space).
- L3—4 turns of 14 s.w.g., 1" diam. (coupled into L2), ends of coil spread to meet the socket pins, condenser mounted across the socket pins.
- L4—Hairpin loop, 5" long of 3" copper tube spaced 1" c. to c. Condenser 1 1/2" from plate pins.
- L5—Hairpin loop, 3 1/2" long of 18 s.w.g., 1" c. to c., spaced about 3/4" above L4.
- L6—Hairpin loop, 2 1/2" long of 18 s.w.g., 1" c. to c., spaced 3/4" above L7.
- L7—Hairpin loop, 2 1/2" long, of 1" copper tubing, 3/4" c. to c., ends spread to meet the socket pins, condenser across the pins.
- L8—Lechers. 1 1/2" effective length of 5/16" copper tubing, spaced 9/16" c. to c. Condenser 1/2" from the short (plate clips are an extra 3/4").
- L9—Hairpin loop, 2 1/2" long, 3/4" c. to c., made of copper sheet 1/2" wide and 1/32" thick.
- L10—Lechers. 3" long of 5/16" tubing, 9/16" c. to c. Effective length 1 1/2", plate connectors are power socket connectors, an extra 1" (see text). Sliding short of 1" wide copper strip and a suitable screw adjustment for tuning.
- L11—Hairpin loop, 1 1/2" long of 12 s.w.g., 3/4" c. to c.

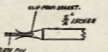


FIG. 5.—P.A. Pin Connector Details.

CONCLUSION

It is appreciated that few Amateurs build gear exactly as described in the literature. Every one introduces some modifications and thus the art progresses (?).

This article is one idea for a 576 Mc. transmitter. No apology is tendered for the use of high powered tubes throughout. If any sort of work is to be done after the transmitter is built, propagation checks, antenna tests, etc., a reliable r.f. source is essential. As the transmitter becomes bigger the reliability of the equipment must increase or one is going to spend all the

experimenting time patching up the transmitter, so build conservatively.

The antenna used here is a 13 element long yagi designed by the author from graphs in the V.h.f. Handbook.

The modulator is a pair of 807s in modified 2JU circuitry.

It is hoped to carry out some experiments with a high powered final. The tubes available here are microptons, 15E, 2C39A and a coaxial tube R.C.A. 6884. This latter tube will take the maximum Amateur input power and requires little drive.

The author would be grateful for any correspondence on high powered finals for 576 Mc. or on 576 Mc. generally.

REFERENCES

1. "Amateur Radio," 1948.
2. "Radio and Hobbies," August 1951.
3. Data and Application Notes for QQE03/20 and QQE06/46. Mullard, May 1958.

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(Continued from Page 5)

Graph showing Output Voltage (Y-axis, 0 to 16 Volts) versus Output Current - MA (X-axis, 100 to 500 MA). The graph displays two curves representing different ripple levels: 10 MV RMS (solid line) and 18 MV RMS (dashed line). A shaded region indicates the coil dust is 3 in.

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ROSS HULL MEMORIAL V.H.F. CONTEST, 1962-63

The Federal Contest Committee of the Wireless Institute of Australia invites all Australian and Overseas Amateurs and Short Wave Listeners to participate in this annual contest which is held to perpetuate the memory of the late Ross Hull whose interest in v.h.f. did much to advance the art.

A handsome Perpetual Trophy is awarded annually for competition between members of the W.I.A. in Australia and its Territories inscribed with the name and life work of the man whom it honours. The name of the winning member of the W.I.A. each year is also inscribed on the Trophy. In addition, this member will receive a suitably inscribed, framed photograph of the Trophy.

Objects. Amateurs in each VK Call Area will endeavour to contact Amateurs in other Australian Call Areas and Overseas.

Date of Contest: 15th December, 1962, to 13th January, 1963

Duration: From 0001 hours E.A.S.T. (1401 hours G.M.T.) on 15/12/62 and 14/12/62 respectively, to 2359 hours (1859 G.M.T.) on 13/1/63.

RULES

- There shall be three main sections to the Contest:
 - Transmitting, Open, 50 Mc. and higher.
 - Transmitting, Phone, 50 Mc. and higher.
 - Receiving, Open, all bands, 50 Mc. and higher.
- All Australian and Overseas Amateurs may enter for the Contest whether their stations are fixed, portable or mobile.
- All Amateur v.h.f. bands may be used, but no cross-band operating is permitted.
- Amateurs may enter for any one of the transmitting sections. All contacts must be consecutively numbered in the one number sequence to facilitate checking.
- Only one contact per band per station is allowed each calendar day.
- Only one licensed Amateur is permitted to operate any one station under the owner's call sign. Should two or more operate any particular station, each will be considered a contestant and must submit a separate log under his own call sign.
- Entrants must operate within the terms of their licences

8. **Cyphers:** Before points may be claimed for a contact, serial numbers must be exchanged and acknowledged. The serial number of 5 or 6 figures will be made up of the RS (telephony) or RST (c.w.) report plus three figures commencing from 001 for the first contact and will increase in value by one for each successive contact. If any contestant reaches 999 he will start again with 001.

9. **Entries** must be set out as shown in the example, using only one side of the paper. Entries must be postmarked not later than one month after the Contest (i.e. not later than 13/2/62) and addressed to the **Federal Contest Committee, W.I.A., Box 6383, G.P.O., Brisbane, Queensland.**

10. **Scoring** for all sections will be based on the attached table. Contestants will have to agree between themselves as to the distance between their stations. Such distances must be shown in their log entry in the column usually used for remarks or bonus points.

11. **Logs:** All logs shall be set out as in the example and in addition will carry a front sheet showing the following information:

Name Call Sign
Address Section
..... Claimed Score

Declaration: I hereby certify that I have operated in accordance with the Rules and Spirit of the Contest.

Signed
Date

Note: Entries on the front sheet must be clearly shown in block letters.

12. The right is reserved to disqualify any entrant who, during the Contest, has not observed the regulations or who has consistently departed from the accepted code of operating ethics.

13. The ruling of the Federal Contest Committee of the W.I.A. will be final. No dispute will be entered into.

14. **Awards:** Certificates will be awarded to the winners of each section in each VK and Overseas Call Area. The VK contestant who returns the highest score in the transmitting sections and who is a financial member of the W.I.A. will hold the Trophy until the next Ross Hull Contest is decided, and in addition will receive an appropriately inscribed photograph of the Trophy.

GENERAL

A new method of scoring has been evolved from suggestions made by the majority of VK Divisions. Comments on the operation of this new method will be appreciated by the F.C.C. It is suggested that contestants obtain a large scale map of Australia and of their State and mark on these maps the radial distances from their location in accordance with the scoring table.

RECEIVING SECTION

- Short Wave Listeners in Australia and Overseas may enter for the Contest, but no transmitting station may enter.
- Contest times and logging of stations on each band are as for the transmitting sections.
- To count for points, logs will take the same form as for transmitting sections but will omit the serial number received. Logs must show the call sign of the station heard (not the station worked), the serial number sent by it, and the call sign of the station being worked.

Scoring will be on the same basis as for transmitting stations. It is not sufficient to log a station calling CQ.

4. A station heard may be logged only once per calendar day on each band for scoring purposes, but additional reports will be of value to the F.C.C.

5. **Awards:** Certificates will be awarded to the highest scorer in each VK and Overseas Call Area.

SCORING TABLE

Distances Between Stations	50 Mc.	144 Mc.	288 Mc.	576 Mc.	Higher
Up to 10 miles	1	1	1	1	5
Over 10 and up to 25 miles	1	1	1	2	10
Over 25 and up to 50 miles	1	1	2	10	30
Over 50 and up to 100 miles	4	2	6	20	60
Over 100 and up to 200 miles	10	4	10	30	80
Over 200 and up to 300 miles	20	10	16	40	
Over 300 and up to 500 miles	10	16	30		
Over 500 and up to 1,000 miles	2	30	40		
Over 1,000 and up to 5,000 miles	10	40			
Greater than 5,000 miles	20	50			

EXAMPLE OF TRANSMITTING LOG

Date/Time	Band	Emission	Call Sign	RST/NR. Sent	RST/NR. Recd.	Distance	Points Claim.	Blank

NOTE.—State whether Time is E.A.S.T. or G.M.T.

EXAMPLE OF RECEIVING LOG

Date/Time	Band	Station Heard	RST/NR. Sent	Station Called	Points Claim.	Blank

NOTE.—State whether Time is E.A.S.T. or G.M.T.

INTERNATIONAL AMATEUR RADIO STATION 4U1ITU INAUGURATED*

The radio station of the world's first International Amateur Radio Club (I.A.R.C.) was inaugurated at I.T.U. headquarters at 1130 a.m. on Sunday, 10th June.

Following the inauguration ceremony, the station began to operate at 12 noon for a continuous 24-hour period. The first call was made by the Secretary-General, Mr. Gerald C. Gross, on c.w. The first contact was made with DL4VK, and contacts with Radio Amateurs throughout the world continued during the day and night—more than 1,300 in all.

The International Amateur Radio Club, which has also been founded at I.T.U. headquarters, is the first international venture of its kind. Its aims are to further international friendship and understanding through Amateur Radio, to co-operate with all Radio Amateur associations throughout the world, to promote the proper use of the frequency bands allocated to the Radio Amateur Service, and to provide the organisation for managing and operating the new transmitting and receiving station.

The station has been installed on the top floor of the I.T.U.'s new building

and, in agreement with the United Nations and the Swiss P.T.T. Administration, it has been assigned the call sign of 4U1ITU. It is to be operated under the supervision of a committee appointed by the members of the Club, and all Radio Amateurs holding an

Amateur Radio Licence will be welcome to operate on it in accordance with the station rules.

The President of the Club is Mr. John H. Gayer, Vice-Chairman of the I.T.U.'s International Frequency Registration Board (I.F.R.B.).



* Reprinted from "Telecommunication Journal," July, 1962.



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S.S.B. POWER MEASUREMENT

I. MACMILLAN,* VK3CS

AT the Federal Convention an item was put up by the VK5 Division concerning the Institute approaching the Department regarding the adoption of the British Post Office method of measuring the power of an s.s.b. transmitter.

As there was a considerable difference of opinion among delegates concerning this motion, it was decided that the matter be referred to Divisional technical personnel for reports, before action could be taken.

It is felt that members generally should be aware what the British P.O. method is, and to understand how it works.

The general principle is that the peak output of an s.s.b. transmitter running at the legal limit should be the same as the peak output of an a.m. transmitter running at the legal limit, which seems to be a fair principle.

If an a.m. transmitter is unmodulated (c.w.) and the d.c. input is adjusted to 150 watts, the output voltage, relatively measured on an oscilloscope (envelope pattern) as the height of the pattern on the screen, will have a certain value, which may be represented by, say, one inch of deflection on the screen.

If the transmitter is now 100% modulated, the modulation peaks (as now shown by the envelope pattern on the c.r.o. screen) will reach twice the voltage that the carrier did, so that the total deflection is now two inches.

Now, if the peak voltage is twice the carrier voltage, the peak envelope power (p.e.p.) will be four times the carrier power, because the transmitter is assumed to run into a constant impedance load, and $W = E^2 \div R$.

* W.I.A. Federal Publicity Officer

From this it can be seen that an a.m. transmitter, 100% modulated, has a p.e.p. of 600 watts if it runs 150 watts unmodulated.

An s.s.b. transmitter can run a "carrier" (single unmodulated frequency) in two ways—either by deliberately injecting carrier from the balanced modulator(s), or by injecting a pure sinusoidal tone into the audio section. In the latter case, because only one sideband is generated, only a single r.f. frequency is generated, and the same effect is produced as when the true carrier is injected, although the r.f. is, of course, the audio frequency displaced from the carrier frequency.

Whatever the method of deriving it, this "carrier" is applied to the p.a. of the s.s.b. transmitter, and having adjusted the d.c. input of the stage to 150 watts, the relative output voltage is measured on the c.r.o., as previously described.

The deflection may be recorded, for example, by means of a grease pencil on the screen, and, by measurement with a rule, further marks are made on the screen corresponding to double the deflection.

If, now, the "carrier" is removed, and speech applied to the transmitter, the peak deflection shall not exceed the second pair of marks, that is, twice the deflection produced by the "carrier". Under this condition the p.e.p. will not exceed 600 watts; the same as a comparable a.m. transmitter. Although this is input power, a class B stage running a high level signal approaches the efficiency of a class C stage, so outputs will be comparable.

Several points are worth making. One is that the frequency distribution of the signal has no effect on the method, because the c.r.o. measures the

sum of all the signal voltage vectors present, it being only possible to have one voltage at a point at any instant and it is, of course, this sum voltage that determines the power.

Most s.s.b. stations already have c.r.o. monitors, and if not, should have, as no other instrument will show whether linearity is being maintained, so that a necessity of having a c.r.o. should be no hardship. In view of the simplicity of a monitor 'scope, and the vast array of suitable components available in disposals, a 'scope might present a lesser outlay than a meter having a specified time constant, as required by another proposed method, and would certainly be a greater asset to the station.

Regulations specifying methods of s.s.b. power measurement are necessary to ensure uniformity of interpretation, but their formulation will have to be approached with some care, to avoid anomalies as a low powered portable station having to be equipped with a c.r.o., which might be a considerable inconvenience; but at the same time giving an operator an unambiguous method of s.s.b. power measurement when his transmitter is capable of the legal limit.

Possibly the answer would be to specify that the c.r.o. method of power measurement need only be applied to transmitters having p.a. valves exceeding a certain rated anode dissipation.

The difficulties can be overcome—the important point is that here is the only unambiguous method of s.s.b. power measurement that has been so far propounded. It is up to the members, through their Divisions to decide whether this is the specifications they want, and then it is up to F.E. to take the matter further

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455.000 Kc. Crystals, £2/0/0 each, includes sales tax and crystal socket.

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BY BILL HEMPEL, VK3AHO

ON Wednesday, 30th May, 1962, I left from Sydney for New Caledonia, the first leg of a great adventure. Just two hours from Sydney I stepped from the giant DC8 jet into a tropical warmth which was a direct contrast to the winter's morning of Sydney.

I was met at Tontouta Airport by Raoul FK8AU, Felix FK8AC, Daniel FK8AY (Raoul's son), Louis FK8AX, John FK8AE and Archille FK8AS. Landing formalities were quickly taken care of and I was soon on my way by car to Noumea, some 30 miles away.

Although I had a little trouble with my schoolboy French, the understanding of the people soon enabled me to make myself understood.

Next day I collected the KWM2 and accessories, which had been sent air freight to me at Noumea by Cal W4ANE. Felix FK8AC did a marvellous job handling all the customs formalities on the equipment.

June 1, I set up the KWM2 in Raoul's shack, which was only five minutes' walk from my hotel. I used my Matchbox and Micromatch to load Raoul's window and vertical. I operated from FK8AU for one week and gave many Amateurs their first two-way s.s.b. QSO with FK8.

On June 7, I packed the equipment and next morning I boarded a DC4 for Vila in the New Hebrides. Pleasant surprise to find both English and French spoken. I applied for a licence and was given the call YJ1RH. I set up the KWM2 in my hotel bedroom, looking out over the beautiful Port of Vila. Temperature was average, 88°F., a little warmer than New Caledonia.

I put up two window antennae at right angles to each other, one was 90 feet out over the water. I once again used the Micromatch and Matchbox to load the KWM2 on all bands. Although I made W.A.C. conditions were very poor and only 800 QSOs for the week.

June 15, I returned to New Caledonia and operated again from FK8AU on s.s.b., also operated from the shacks of FK8AC and FK8AX on s.s.b. I also had the opportunity to test the 12v. transistor supply with the KWM2.

June 24, I departed from New Caledonia by DC4 and six hours later we came in over Wallis Island, a volcanic island of 62 square miles, surrounded by a coral reef. As the DC4 touched down on the grass strip, built by the Americans in 1942, I caught a glimpse of the hundreds of native people who had come from all parts of the island to greet the monthly plane. On stepping from the plane all passengers were presented with a beautiful flower lei and I felt I was indeed welcome to this island paradise, so remote from our modern way of living.

I was on my own now, no Amateurs to meet me here. I supervised the unloading of my precious boxes from the aircraft into an old utility, soon I was on my way to Mata Utu over a seven mile road built by the Americans

during World War II. Mata Utu is the administration centre for Wallis, but apart from the Governor's residence, the King's two storey home, and cathedral, Mata Utu is just like any other native village on the island.

The population of Wallis is approximately 8,000 French Polynesian natives who speak a little French and their own language, which is a native dialect. The main foods, which I also ate, are yams, cassava, bananas, arrowroot, paw paw and fish. Education is provided by the missionaries, which is subsidised by the French Government.

July 29, 1961, Wallis and Futuna were granted the status of Independent Overseas Territory of the French Republic.



Archille FK8AS (left) and Raoul FK8AU (right) with the ones that did not get away.

The natives are very expert at weaving and making of tapa. Tapa is a bark cloth, decorated with geometric designs and is widely known for its artistic craftsmanship. Cargo vessels call at Mata Utu about every two months and T.A.I. have a monthly air service. The money used is the Pacific Franc. 100 F. C.F.P. = \$1.00, or 200 F. C.F.P. = £1 Australian.

June 25, I called on the Governor and presented my credentials. He authorised my operation with the call sign FW8BH, the Governor then left me in the care of the Post Master who took good care of me from then on. I set up my shack in a disused toilet at the rear of the Post Office. My antenna was a multiband dipole fed with RG58U. 110 volt power was available for three hours daily.

Toward the end of my stay, I was able to put up another antenna at the engine and battery room, about 200 yards from the Post Office. I used the KWM2 from the battery room with a 12v. transistor supply, although band conditions were poor after 0800 G.M.T. when the 110 volt supply was shut down.

My first QSO from FW8BH was on July 15 with VK5AB who had been waiting seven hours on the 20 metre band for me to show up. From then on the band went wild, the S meter on the KWM2 stayed at 20 over 9 for the whole of the American phone band.

QSOs were slow the first day, but gradually I thinned them down. When I started c.w. operation, the QRW started all over again. I used the external v.f.o. unit in conjunction with the KWM2.

On the evening of 8th July, I was all set to work a lot of VK and ZL friends on 40 and 80 metres. I was using the transistor power supply and at 0900 G.M.T. I was in QSO on 80 metres with Jock ZL2GX. In the middle of a transmission a sharp crack in the receiver, like lightning, followed by a brilliant flash in the northern sky terminated all communications on 80 and 40 for the night. The H bomb had been fired.

I walked to the door. It was now as light as day. I could see natives running to the Chapel and everyone appeared to be very frightened. In the north a white band of light extended over Wallis to the south, terminating in a fiery red glow. After 10 minutes, the red glow extended to the north and the whole sky gradually changed to a pale pink. The bright glow lasted about 10 minutes and it was possible to see as if the sun was shining.

After 20 minutes, I returned to the KWM2. 80 and 40 metres were completely dead. I loaded up on 20 metres and continued working Ws until 1.30 a.m. local time, when the band went dead.

Next morning WWVH were sending a normal 5 on 15 Mc., but conditions were very poor from then till my last day—11th July. Total number of QSOs were 1,800 on s.s.b. and c.w. on 80, 40, 20 and 15 metres.

QSLs for Ws to W4ANE and others to VK3AHO.

July 11 all equipment was packed and addressed back to Cal W4ANE.

At 0630 G.M.T., just on dusk, the DC4 rose slowly off the grass strip and I reluctantly said farewell to a tropical paradise where equality, liberty and fraternity really exist.

July 12 I met FK8AU again and went by car with Raoul and his family for five days to a coffee plantation on the north coast of New Caledonia.

July 18, I said farewell to the FK8 boys who had given me such a royal welcome that I have already made a firm resolution that I will return to FK8 and FW8.

I boarded the DC8 jet for Fiji where I stayed with Joe VR2EB in Suva and met VR2DI, VR2BC, VR2HJ, VR2AP, VR2BZ, and at Nadi VR2DS, VR2DQ and VR2EH.

From Nadi Airport I operated the Collins S line with the call sign of VR2DS. Conditions were very unstable.

July 28 once again I packed and boarded the giant Boeing 707 jet on my last leg home. The great adventure was over, with over 3,000 QSOs from four countries.

My thanks to all who assisted and especially to Cal W4ANE who sponsored the whole expedition.

* Kyalley, via Tongala, Vic.

SIDEBAND

Phasing, Xtal Filters, Balanced Mod., Linear Amps., Vox
 Sub Editor: BUD POUNSETT, VK2AQJ,
 6 Alice Street, Queanbeyan, N.S.W.
 ADDRESS CORRESPONDENCE FOR THIS PAGE DIRECT TO THE SUB EDITOR

TRANSMITTER ACCESSORIES

Our man in Goford, Lindsay Douglas, has been busy in recent months and here, in his own words, is a description of his latest work.

ANTENNA SWITCHING UNIT

Fig. 1a illustrates a simple but very useful gadget in shack of VK5ON. It enables the tx to be switched to any one of four coax antennas or to the dummy load for tuning-up purposes. The switch used is from a BC375 tuning unit. The s.w.r. readings are slightly higher with the switch in position, but the losses involved are very small.

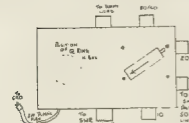


Fig. 1a—Antenna Switching Box

The all-band ferrite transformer (Fig. 1b) shows no sign of heating although it is placed across the 50 ohm line with about 100 watts of peak power. This transformer is the same as described previously for a TX switch. It allows a two-inch deflection on a five-inch scope to be obtained on 30 and 40 metres. The stray capacities involved (120 pF. c.r.o. plates, 40 pF. plates) resonant with the five-turn coil to give 3.4 inches deflections on 30, 15 and 10 m. VK3AC, Leo McMahon, also swears by this system for c.r.o. take-off and he says that rough tuning with a 200 pF. condenser in parallel or series at the c.r.o. plates allows control of the height of display with a 3 inch scope.

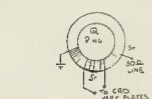


Fig. 1b—All-Band Transformer

If one uses less than 100 watts the five-turn coil could be increased to 10 turns. I may mention here that a small relay from a Command tx is used to vary the s.r.t. grid-bias on transmit.

On receive the c.r.o. picture is absent but comes up to full brilliance when the relay is actuated by the tx push-to-talk switch or vox.

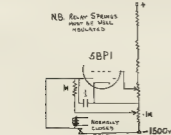


Fig. 2—Brilliance Control.

TANK LOADING CIRCUIT AT VK5ON

This is an adaptation of the circuit in Collin's S.S.B. Handbook. When the 81A5s are correctly loaded, the ratio of the r.f. at the cathodes to the plate r.f. voltage is also correct. At this loading the meter shows a null (the zero on the 0.5 mA. meter has been advanced one division to make this easier to read). When setting up the circuit adjust loading so that the ratio of grid current to plate current is about 1:5 at full ratings for the 81A5s. This would be say 50 mA. grid, 250 mA. plate (not cathode) current. The tx is operated into a dummy load of course and the key is pressed for a couple of seconds only.



Fig. 3—Tank Loading Circuit.

Now reduce the drive so that the plate current is exactly 100 mA. and adjust C for a null on the meter. (Beware of high voltages, keep one hand behind your back.) Now at any future time the loading can be checked by obtaining a null at 100 mA. plate current. There is some difficulty in obtaining a 1 pF. condenser which can stand 1,000 volts r.f. without melting. Four 4 pF. mica condensers in series would be suitable, or a small section of large size co-ax cable with the inner conductor 1/8 inch in mesh, as it were. However, don't press the key for too long when tuning up. The polarity of the germanium diodes is quite important.

APPLYING A.L.C. TO THE STX

This is done very effectively by applying rectified bias from the 81A linear stage (or even the 6AH6) to the 6AH6 amplifier. There is quite a deal of amplification between these two stages and a positive bucking voltage of about 45 volts, is very satisfactory. When the system operates, the cathode voltage of the 6AH6, as measured through R3 (22K), drops from 1.2 to 0.6V. If there is not sufficient gain, the 6 Mc amplifier bias setting may be altered to increase this by 5 db. (see manual).

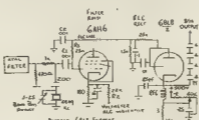


Fig. 4—A.L.C.

The 6AH6 linear amplifier has four components added, R1 (0.25 meg.), R2 (22K) and C2 (0.001 pF. disc ceramic). To save altering commercial equipment, a tiny adaptor was made to fit the 7-pin socket of the 6AH6. The plug was a drilled pos.-neg. connecting plug from a hybrid car-radio and a miniature 7-pin socket was soldered right on top, pin for pin excepting pin 1. R1 and C2 were cradled in here and some plastic insulation tape used to cover the assembly before plugging in. R2 and C2 were mounted beside the new valve shield. One side of C2 connects to the base of the shield and a timed wire from this makes contact with the old shields. The items to the right of the dotted line are situated in the

linear amplifier stage. The rectifying diode could be a 6AL5, 6BM6 or silicon diode. A germanium diode would not have sufficient back resistance.

RECENT COMMERCIAL EQUIPMENT

The trend in Australia recently has been towards commercial equipment for both the transmission and reception of s.s.b. Many Amateurs who cannot find the time to devote to building their own. And the commercial way the only way to get on the air. There are some "Amateur purists" who may argue that this is getting away from the Amateur Radio spirit, but in most cases, it will be found the people using factory-made gear have come up through the ranks of home builders. Many of us do not see overseas publications, so here is a brief description of a few units on the market in the United States and also available through certain distributors here in Australia.

B. & W. 6100. A very interesting tx is the Barker and Williamson Model 6100. The sixty-one hundred has one very unusual feature for an Amateur tx and that is a crystal controlled frequency synthesizer. This means that a normal continuously variable v.f.o. is not used but instead three controls are used, one to set the hundreds, one for the tens, and one for the units of kilocycles. The units dial is continuously variable. A crystal lattice filter is employed to generate the s.s.b. with a bandwidth of 3 kc. The has an output of 100 watts on all bands, 80 to 10 m. info a 30 to 100 ohm line.

Hallitators HT22B. The latest from Hallitators is the HT22B. This is also using the filter method, using a hermatically sealed crystal filter in contrast to the earlier HT27 which was a phasing type. This gives an unwanted sideband suppression of 50 db or more compared to 40 db. with the HT27. The balanced modulator tube is a 7300 which provides high carrier suppression ability. Again output is of the order of 100 watts on all bands 80 to 10 m. with fixed 62 ohm output.

A companion to the HT22B is the HT23B linear amplifier. Similarly styled, the HT23B tx, this amplifier runs a kilowatt to a PL175 power pentode, making it a little "overpowered" for use as it stands in Australia. An interesting point about this amplifier is the use of a passive grid circuit, having a low impedance. This matches the HT22B output and requires considerable driving power which precludes the use of an attenuator. The output loading is variable and designed to feed a 50 to 75 ohm line. The frequency coverage is as for the HT22B.

Swan Transceiver. A new development in transceiver design is provided by the Swan Engineering Co., Benson, Arizona. White

(Continued on Page 10)

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ADDRESS CORRESPONDENCE FOR THIS PAGE DIRECT TO THE SUB EDITOR

VP8GQ and VP8EG, QSLs go via G3PAG, J. J. Davies, 139 The Fairway, Leigh-on-Sea.

also heard VKIAZZ, but the band faded before the QSO could be completed. VKIAKH wld WIRB and W3CJCR and heard W3GOF

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NEW SOUTH WALES

Mr. M. J. No. 10. Interstate break-throughs but quite a lot of sideband activity, both single and double, with 22AU, 22GX, and 22VJ active. It will be interesting to see the advantages of a.s.b. and d.b. when the band opens.

144 Mc: SWK at Forbes was worked from Sydney for the first time since last new year, on Sunday, 7th Oct. Signals were peaking at 1 and 1 1/2 ways over a path of 180 miles. I understand several stations in Bathurst will be also coming on later in the new year and the coming season should prove interesting. Dave 2AWZ is running a QQQZ/40 mobile, both on 7 Mc. and 2 mX and hopes to clean up at all the Conventions. He is using only one 'extra' battery but has not been seen pushing the car. Roger 2ZRH now has d.b. with a 4X150 final going very nicely and has asked to try and work 2ZCO on 2 mX during the summer. Charlie 2NP has had a 523 left on his doorstep. Rumpur has it that he intends using it mobile on a long lead.

Not to be confused by the several stations using sideband, several stations have been heard using multiple curriers quadropole sideband which usually only get one station at a time to reply. New Canberra station heard in Sydney is Doug 1DG on approx. 144.82 Mc. Equipment details as yet unknown.

The last 7th Oct. meeting on 14th Oct. was particularly interesting as well known sidebander Arrie Bles, ex-PAI, gave a lecture on 'The 7th type' and the 7th type was not well attended so many people missed out.

In response to my previous item asking for intrate information, the only reply received was from well known w.v.f. Chas. Abernethy who is very active on 6 and 2 mX and heard all 12 districts during the past 2 mX months. I have received a letter from 2 months, Phil 2ZBX will be the new acbie. Flash 2ASZ now has found a new 8 mX converter which is going to mount in a 2 mX. He is also running a 2 mX sideband using 50's and it even works—73, 2Z1B.

VICTORIA

Eastern Zone—Very little news re v.h.f. bands this month from the Eastern Zone, because of band DX conditions. I only worked one or two stations locally and the band was low, and some of the boys either lost or had their signals damaged.

John VRIG at Ocean Island is building up 2 mX equipment and he hopes to be active during Nov. this year on approx. 32.9 Mc., running a QQQZ/40 around 80-100 watts, with a good site back to Australia. He is also active on 14 Mc. Skeds are being arranged, 73, 2ZCG.

QUEENSLAND

Six metres in Brisbane is still relaxing along with not much spectacular activity. George 2ZGD is back in town after a long stay in the north of the State. He has just decided to transmit from his QTH instead of his car. New stations on 6 mX are Jim 4Z47, who uses a 2 mX dipole antenna, and Peter 4ZC4, who gets out magnificently using a 2 c.1 yagi.

Back in Brisbane after a holiday in the southern States is John 4ZAG and Year's. John's dipole antenna can possibly be attributed to the fact that he didn't cross many VK3 bridges.

Steve's hidden tx hunt was organised by Royce 4ZRH and v.h.f. associate Carlo, who was not able to attend because his wife June had just realised another harmonious conception. Carlo also tx hunt was well attended, seven cars taking part.

V.h.f. Group meeting for Sept. was well attended, but poorly organised. The one reason for this was the absence of a number of slides taken at the Scouts' Easter venture at which v.h.f. types provided communications as a means of checking the arrival of various Scout patrols through miscellaneous check points. It is hoped that next year's communications will be as good as the last. Visited to Brisbane was Dave 4ZDG, from Ayr, who visited last V.h.f. group meeting.

Interesting mutterings heard on the air about the Brisbane group's intention of obtaining a small bits of pipe necessary for Amateurs to get going on 3400 Mc. It is hoped that cutical quad enthusiasts building for this band will make some other type of antenna.

Have heard over the grapevine that there has not been much activity on 8 mX in Cairns lately but someone still calls CQ forcibly on 51.4 Mc. or thereabouts, so tune higher up the band sometimes and you may discover the lost tribe.

WESTERN AUSTRALIA

Sept. Meeting: 24 members and visitors attended. Bert 6ZDF and Lance WLA were voted into the Group. The major portion of the evening was devoted to an auction of members' gear. Dennis 6AW acted as auctioneer, and all gear sold earned the Group 19 per cent. of the purchase price.

Coco 1c. Reaser: By the time this goes to print the equipment for the beacon will be on its way. The tx and keyer are completed, the converter and power supply are almost ready. After receipt of the beacon operation will be greatly relieved by this Group.

Paidmaster Trial.—Several members of the Group assisted the W.A. Car Club by providing radio links between controls and the vehicle team. Four base stations and 11 mobile units operated to cover the course. The freq. used was 14.88 Mc., which was allocated to the Car Club for this purpose. Valuable experience was gained by all in operation techniques and mobility in transverse radio equipment and setting up in unusual places. Those who took part were 6PN, 6ZCS, 6ZDM (the organisers); 6ZDK, 6ZDG, 6ZDH, 6ZDI, 6ZDW, 6ZEM, 6ZSK, 6ZCT, 6ZDT, 6LK, 6ZDS, 6ZAT, 6ZST, and 6ZDN.

60 Mc.: Barry 6ZCF, Hank 6RR and Bert 6ZDS are new stations on this band. Activity is on the increase. Reports of new gear built or being built shows promise of maximum activity when the DX season opens.

144 Mc.: More stations are now operating on this band and some good contacts have been reported. The by-word now is, "See you on 2."

676 Mc.: Charlie 6LK and Rod 6ZDS have gear operating on this freq. Although two-way contacts have been heard, they mainly operate cross-band.

Bill 6ZDC has taken a position in Kalgoorlie approx. 350 miles east of Perth. He will have both 6 and 2 mX gear running by Xmas and hopes to work east and west from there. The lesser distance from VK3 could prove a winner for Bill; best of luck.

To All States East of VK4! Our beams are being pointed eastward! We check all signals from that direction. Turn your beams our way. Who knows? You could contact the first VLF this DX season! 73, 6ZDM.

TASMANIA

The last v.h.f. meeting was well attended and several important subjects were discussed including the official frequency. After much debate, 144.10 Mc. was decided on for a calling frequency and 145.8 Mc. for mobiles. The folly of this decision will be realised as time goes by.

David 7ZAI and Danny 7ZDM have returned from the north of the State where they have been. They did not have much time for DX hunting. They worked most of the Launceston stations and TXK at Portsea, using at one stage a converter, ARV, 6Z438 re-tup.

144 Mc.: Skeds are being kept between 7ZEE at Oaklands and 7LZ and possibly some others in Launceston. No signals have been heard to date but rumors are flying. Frequencies used are 7ZEE 144.324 and 7LZ 144.67 Mc. and the northern stations transmit for five minutes at 1830 and listen for 10 minutes, then transmit again at 370 each Saturday night.

News was received rather late to co-operate fully with the best VK3 party who had a good day on Mt. Duffield on the week-end of the 8th, but it should be able to co-ordinate efforts for the next one. Some four or five are interested in the band from VK3 for various field day enthusiasts and should help matters in this regard.

60 Mc.: Nothing spectacular has been reported since the last time but the amazing amount of r.f. a certain Net is getting from his Q83/800 tx which is under test. David 7ZAY is experimenting with a Comand receiver and is hoping for good stability. 73, 7ZEE/T.

PAPUA

After an absence of signals for three months Sept. brought an opening to JA. On 25th weak JA signals were heard on 50 Mc. from 2015 to 2200 hrs. 7AIFEN and 7AARK being worked by BAU. TX matter signals on 48.8 Mc. were heard on several days during the month. On 16th very weak signals were heard from 2015 to 2200 hrs. during the afternoon and at 1940 a weak carrier was heard on 50 Mc. bearing south. No other openings were observed during the month.

Jim 9AS at Wewak, T.N.G., is now conducting tests on 30.940 Mc. from 1830-1700 and 1900-1000 hrs. daily, running into, but so far he has not been heard in Moresey. 80K, in Moresey, now has a tx for 144 Mc. and is expected to be heard in the near future.

October has brought the advent of the one-sided moon close to this location. A test transmission from 7NQ7 Townsville was received 58 at 1643 hrs. 1st Oct. and on end Oct. 1st day of writing these notes), the test transmission was 58 from 1300 to close-down at 1800 and again from 1800-1700. A 1 v. rx was hastily borrowed and an excellent quality picture was received at 9AU's QTH from 1400-1500 today, very little snow and a better picture than your scribbles has received on many occasions in Sydney.

Now about some 144 Mc. skeds from you northern VK4 chaps on 1447. Drop us a line to Box 316, Port Moresby, if you are interested. The antenna on Ch. 3, by the way, is only a 5 ft. yagi up about 30 ft. 73, BAU.



Correspondence

Any opinion expressed under this heading is the individual opinion of the writer and does not necessarily coincide with that of the publishers.

ANY TAPES OF V.H.F. SIGNALS?

Editor "A.R." Dear Sir,

We in VK3 are keen to make a tape recording of notable v.h.f. achievements. If you have past five or six years (including the last snapshot maximal) This tape would be similar to a recording made by Ed Filion that has been heard in Australia recently.

What a good deal of very interesting material has been offered by several leading v.h.f. stations. It is felt that the 2 mX, 6 mX, 144 Mc. or a.w.f.s. may have tapes of interesting v.h.f. signals.

The signals in which we are interested are: 6 mX, 144 Mc. including JA, ZLA, or any signal originating overseas, including commercial v.h.f. or l.v. signals, also 144 Mc. and long haul signals. Once 1, or 11 particular is there any record of the VK3-ZL 5 mX contacts?

In short, if you have, or know of anyone who has, recordings of any interesting v.h.f. signals, please contact the undersigned.

—Al Rechner, VK4ZCR.



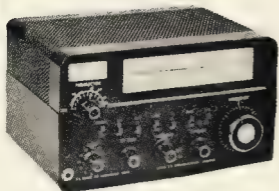
ERRATA

In the article "Matters Mobile," in the August issue, the earth has been omitted on the cathode of the detector diode in Fig. 8.

The author of "A V.h.f. Sideband Rig," which appeared in the October, 1962, issue, draws attention to a couple of errors in the schematic of the 50 Mc. sideband tx. The pi output tank of the second 8AC7 v.f.o. chain should have a 1000 pF. coupling condenser, not a 14 pF. as shown. Also the pi coupling capacitor for the 50 Mc. final is 500 pF., not 50 pF. as shown.

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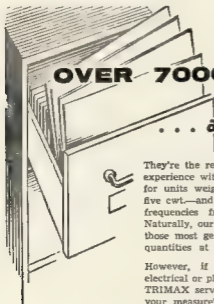
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FEDERAL AND DIVISIONAL MONTHLY NEWS REPORTS

(SEND CORRESPONDENCE DIRECT TO DIVISIONAL REPORTER NAMED AT PARA. END)

FEDERAL

30 AND 100 METRES FOR BROADCASTS

VKS Division has requested consideration be given to the use of 30 and 100 metres for Sunday Broadcasts and call-backs, and it was decided to hold the matter until a survey of frequencies used by the Divisions can be compiled.

FEDERAL CONTENT CO-ORDINATOR

VK1ABV, Tom Strathairn, has been appointed Federal Content Co-ordinator, an F.E. position designed to maintain closer contact between the F.C.C. and Federal Executive, in the interests of more accurate records, speedier award issuing, and smoother operation, some features of which have been sadly lacking in past years.

CONTENT CERTIFICATES

Lists of members due certificates for various contests over the past two or three years have been prepared, and most certificates will be forwarded shortly.

New certificates for some awards will shortly go to press and after considerable study of a large range of potential designs, the new R.D. certificates are now in the hands of the printer.

MEMBER CERTIFICATES

A new professional looking certificate design has almost been decided, and the new style certificates will be available on top grade paper before long.

50 METRE RELAY OF 2 CALLS

The VK3 Midland Zone has requested that permission be sought for the relay of 2 call transmissions on 50 metres during Zone look-up.

F.E. considers that this facility should be available to all Divisions, if at all, and the Department has been written to recommend the matter.

FEDERAL CONVENTION ITEM

A VK1 agenda item concerning the use of 10 metres for 2 calls, and which was omitted from the VK1 agenda, has been circulated to all Divisions for decision.

SPACE COMMUNICATIONS

A conference on space communications is planned for Geneva in October next year and the I.A.R.U. has renamed member-societies, during the W.I.A. is one of the importance of Halson with Government authorities to ensure that Amateur interests are protected. The I.T.U. Conference and the I.F.A.R.C. have proved valuable experience for the W.I.A. in this direction.

OVERSEAS NEWS ITEMS

Belgium Amateurs are now permitted to use a.s.b.

Some G Amateurs are now permitted to employ narrow band picture transmissions in the bands 80 metres up.

The Swedish Amateur Society is planning 500 watt beacons on 140 Mc and 435 Mc. between 1965 and 2000 Q.S.T. daily.

The W.I.A. has voted in favour of the admission of the Radio Sport Federation of the U.S.S.R. to the I.A.R.U., but has added comment regarding their wild open card list, and observance of gentlemen's agreement sub-bands.

A list of Amateur Society fees showing El Salvador to be the highest (\$4) and Spain the lowest (\$2c). We seem to be in the middle, listed as \$3. El Salvador, incidentally, has the smallest number of members—25.

The Okinawa Radio Club announces the new Okinawa Award. Qualifications for the award by VK stations consists of confirmed contacts with five KJRW stations. Certificates together with your own card should be sent to Awards Manager, P.O. Box 37, Esdena, Okinawa.

There is no charge for the award. Please note the address change for the following A.R.R.L. QSL Bureau: VK3 QSL Bureau, George T. Kemm, VERUX, Dept. of Transport, P.O. Box 55, Fort Smith, N.W.T., Canada.

Membership in the QRP Club (U.S.A.) is growing space. Upwards of 330 members have been enrolled in approx. 12 months. Membership qualification is the use of 100 watts maximum, or less, at all times. VK members to date are: VK3 KJL, SNC, 455, 73M, 424 and 317. Full information may be obtained from any of these stations or from the Secretary WK3B.

—Ray Jones, VK3BJ, Manager.

NEW SOUTH WALES

NORTH BRANCH

At the Sept. meeting we saw the best roll-up of members, associates and visitors that the Branch has ever known. The roll-up was encouraged by Barry ZIAH and his team of helpers who travelled from Sydney to lecture on the latest developments in V.h.f. Barry claimed he was not a good lecturer, but he certainly performed a wonderful job. As well as a most interesting discourse, samples of each piece of equipment described. However, passed around. And, as if to demonstrate his faith in the honesty and integrity of the Branch boys, all the crystals he was left in the gear! Trusting lads from Sydney! Thirty-eight in the audience almost filled the lecture room.

After the technical bit a disposal sale was held with Gordon Z250 as manager and with me holding the cash. I really cannot understand the F.C.C. attitude towards the sale. However, after some Arabian type bargaining, most of the goods on hand were sold and those among our ranks who were the complacent, complimentary term of scavengers, finished off the 50W with no cape and the like for some paltry sum. It is reported that the wild scavengers returned to their homes and worked far into the night to get their threepence worth. Others of course were already working far into the night preparing gear for the Field Day and working out diets so that it would be possible to consume as much as practicable on the night of the dinner, while others still were doing last minute sorts of tasks in preparation for the same event.

The Dinner, held at the Esplanade Hotel, was, as we feel, a most successful one. Thanks to speak were Stuart ZATF, Pearce IAPQ and Max SMP in that order. A very enjoyable night was had by the sixty who attended although Dennis must have enjoyed himself most, for it was he who smoked the most cigars. Some of our more adventurous members advised the dinner after the dinner, to the Casandra, a British destroyer visiting the port. They were saluted as they went aboard and then thrown off. Such hilarious goings on have not been seen for some time in our fair city.

The weather for the Field Day was perfect. A great number of cars equipped for the event turned up to do battle and fendish were the plans of those hiding the elusive r.f. generators. One false start was followed by the 3 mhz boys for some time, while finally resolving itself as a superregenerator in a competitor's car. In the 7 meg. hunt a cleverly disguised driver took to at least one competitor and caused Sherwood to almost fall into the creek. And that included as well the electric shaver

he was using as a microphone. In the scramble, a dual developed between Bill KXT and Dave IAWZ. They finished with Dave first and Bill second. It was not until 10.15 when we saw Dave's tall lights glow on transmit that it was found he had been using 100W. In the first of the Morris Minor's Lot was found the first 3 mhz box and second in was Z2CT.

The afternoon 2 mhz hunt was the subject of television coverage and a cameraman from NBN was there to film the fun and games. This was won by John Z2AB with Z2DN 2nd. All the cars were parked before the all-seeing eye but despite a good effort on the part of the reporter, very poor coverage was given of the event on the tv, and even then it was a week after the event, despite promises to the contrary. This was hardly the publicity we had expected.

Dave ZAWZ and Bill KXT were the only competitors to find the 7 meg. rig and they arrived in that order. Some really first class home-built gear was on display and after considerable thought the committee awarded the prize to Ken IANU, our Morris merchant from Muswellbrook. The day ended with the prize for the free for all competition going to the bidders securing all the bargains. The big sound from 21KX, Tony Z2CT won the lucky number so I am told.

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For general news this month, things are quite poor. Shannon Bill Z2L finished off his latest loco only to have it leave the rails in a sensational manner. Harry ZAF4 found that he had so much gear in the shack that he couldn't get on the bench so he sold half of it, the gear, I mean. Aditional ZCS is back on the bench, and no looking now. At the Payne has the only blue fluorescence magic eye in the area—caused by doing some strange short circuiting. The 7 meg. rig was almost forgotten, at least three of our associates have decided at last to do some work towards their ticket. I won't mention who they are at this point, but they will be sure to get it done.

The Monday night re-broadcast of 3WT's news is still being conducted by IAWZ and KXT, and the news is quite good. The next meeting of the Branch will be held in the usual place, University College, Raffles Hill, at 8 p.m. on Friday, 9th November. Listen to SWI or 2APX for the date of the lecture for the evening. I do not expect there will be any social gathering this month, but check up on the monthly general meeting on this. 73, ZACK.

SOUTH WESTERN ZONE

The 10th Annual Convention of the South Western Zone of the W.I.A. was held over the holiday week-end, 29th and 30th Sept., at Gundagai. Those present included the Convention were Harold ZAAH, Bill ZAGF (also his XYL and two daughters). It was pleasing to have quite a number of Amateurs present from other Zones, as well as the South West. The Convention opened on Saturday morning at the Gundagai C.W.A. rooms, where registration was commenced. The Convention was of tea provided by the XYLs. During the afternoon, visits were made to the beauty spots of the surrounding district, terminating at Dog-Flat-Lake. Box where a delicious afternoon tea was provided free by the Chamber of Commerce, for members. The evening session commenced at 7.30 p.m. with a Dinner, which was chaired by Bill ZATF, sixty-six adults and twelve harmonics attended. The dinner, during which the Shire President, Cr. George Smith, opened the Convention. The toast of the W.I.A. was proposed by Ross Z2N and was acknowledged by Harold ZAAH, who then gave an interesting address on activities of the W.I.A.

Sunday morning saw the field events under way. The 3 mhz hunt was won by Bruce Z2QX second. Next was the 3 mhz fox hunt, and this was won by IVP in record time by Tim Z2QX, with Eddy IVP second. The all-band scramble was won by Harold ZAAH, with Col ZANP a close second. The most efficient h.f. equipment was the Z2QX, with Eddy IVP taking the prize in the v.h.f. section. The ladies' blind-fold tx hunt was won by Joyce, XYL of SACO. The girls' event was won by Lynette, harmonic of SACO, and

FEDERAL QSL BUREAU

Eric Trebilcock, BERTS10, the Victorian Division Inland QSL Manager, will be in Western Australia from Nov. 1 until Dec. 14 next. During his absence the duties will be performed by his predecessor, Noel Storrn, VK2ZO, and he will open his office from the rooms at 478 Victoria Pde., East Melbourne. Alan Reid, VKCAHR, presently in U.S.A., visited Golden, WNEWS in September. Alan then pressed on to Seattle, Wash.

SILENT KEY

It is with deep regret that we record the passing of—

VK12L—T.G. (Doc.) Hewitt.
VK2AP—AL Pittard.

the boys' by Peter, harmonic of 24KV. Competitions for the ladies during the day were won by Joyce, 24KV, of 24QO, and Barbara, 24KV, of 24U. The prize for the lady travelling the furthest distance went to Jean, 24KV, of 24SF, and the prize for the lucky number went to Mrs. Mills, mother of 24TM.

A barbecue lunch helped to create a picnic atmosphere which continued through the day. The disposals sale in the afternoon was well attended and cars left more heavily laden than when they arrived. A lot of thanks was given by the Zone Officer, Bill 24IV, to all who had helped make the Convention such a success, particularly Dave 24E and Joyce, his XYL.

BLUE MOUNTAINS SECTION

The monthly meeting of Sept. was held at Lewson on the third Friday night, 17 members were at Lakemba when Les 22RI was unable to give his lecture due to a business trip. Anyway, Les will be along for the next meeting and it will be transcribed equipment including 2 mks as before. The evening was still as late as usual, somehow there is always plenty to rag chew about. Supper these days is good, but on the 22nd, probably our club is the difference between a profit or loss for Sid's 24VK business.

The Bush Fire exercise proved very successful. Bill 22Z and Rex 24RM acted as base stations, whilst 24Z, 24VN, 24SE, 24NK and 24BK as mobile stations. The operation was on 2 mks and the exercise was very close with the mobiles maintaining contact all the time. When on mobiles, another civil defence exercise is coming up similar to the previous one at Lakemba, so keep those mobiles going, fellows.

Warick 22MS is still busy with study and exams, etc., although not on the air I understand, and his lifeline. Best of luck Warick and hope to hear you soon. Also

OBITUARY

DR. T. G. HEWITT, VK3LM

"Doc" or Tom Hewitt, as he was known to his many Ham friends over 30 years, was all respect to the living and the great St. Luke in thought, word and action, and to know him was to love him. This is Luke—my beloved physician and as such he will be sorely missed throughout the North Coast of N.S.W.

Pre-war he was well known throughout the world with an outstanding signal from his radio beam as VK3LM. After the war, post-war as VK3LM. Lamore over the past few years his activities were gradually curtailed as he became more and more largely as a result of his failing health and the exigencies of his calling.

His interests were many and varied and his versatility was such that apart from his skill as a surgeon and physician, he could weld or "turn" with the best of them. His grasp of the technicalities of automobiles, photography, cabinet making, boat building and radio was truly staggering, and how he found the time and energy to do this he knew. His knowledge of the latest in medical practice placed him in a sphere apart. The physical and moral courage displayed over the past couple of years, whilst in the throes of the final stages of his fatal illness, are well worthy of the appreciation of all and he was remembered by all who knew him as one who was privileged to know him as "that great and good man."

On the part of his many friends in Ham Radio, it can be said that his wisdom and kindness will be sorely missed and his friendship never replaced.

May the key never be silent in that Grand Lodge Above.

So passes a perfect gentleman, a wonderful friend and a true Ham, to his sympathy for his irreparable loss.

A. W. FITTARD, VK3AP

It is with sincere regret that the VKS Division records the passing of VK3AP, Alf Fittard. Alf was very active on all bands 30 years ago and this last 10 years or so he was active in the time to the 2 mks band. For a few years of late, Alf did not enjoy the best of health, although he did attend quite a lot of Institute meetings.

VKS is the poorer for his passing, and sincere sympathy is extended to his wife and family in their bereavement. Vale Alf.

hear that Warick has been giving Jack Watts a hand with his A.O.C.P.

Two new calls will be issued to club members soon, viz Jack Ferris and Noel Walker, both are ready to go. Jack has 40 mks chaps, it's been a long road but I am sure you will agree it was worth it. I notice Bob 24E has a contest and a support has 40 mks whip, etc. looks a bit of all right.

Our next Field Day will be held at Lewson Swimming Pool on 24th October and we will be equally as successful as previous years, all are most welcome.

My apes tell me that Bob 24SE represented the Section at Vetsville the long week end, but as yet have not heard any reports. Yours truly and Noel Walker journeyed to VK3 land the same week-end and the only troubles were with equipment which arrived otherwise an enjoyable run. We met some of the boys at Gundagai on the way back and by all accounts their Convention was a big success. Frank 24CQ wants to know where Trevor 24M has been, where are you, Trev? Haven't heard you yet. Derrick Boyd and Sid 24VK are hot on the job with the School Radio Clubs in the area, so I shouldn't be long before everything is organized. T3, 24DA

BOORAGUI HIGH SCHOOL RADIO CLUB

This possibly may be the last time that notes from this club appear under a separate heading as at the month of September 1962, the club is to be reported from now on by Ken 11E. This we think is a good thing and can only assist in furthering the motives of the school club which was set up to give the boys a chance since formation and we now have over 24 regular members. Radio questions are to appear in the Bulletin and we will be happy to answer to another question and this year, for the first time, we have had our photograph taken as an official school group.

The 11E is back on the air and we are following the new "Operator's Certificate" scheme, so please give us a call if you hear CQ from Booragui. The members now handle all the internal and external p.p.s. at the school are responsible entirely for the tape transcription service and general recording. Another of the boys has been selected for an electrical apprenticeship among competition from 36 other candidates. Thank you Mr. Editor for tolerance with our notes. T3, 24TZ.

VICTORIA

About 25 members were present at the meeting to hear Jim Goddard, VK3ZGO, tell of his experiences in the field. He showed his talk at his radio souvenirs. Jim illustrated his talk with a number of slides showing scenes in his itinerary. The most amazing thing about his visit to U.S.A. was the number of VKs he met whilst there. Thanks for an interesting evening Jim.

There was very little general business, and although Ron 3VN tried hard to start a debate, it died prematurely. Still, as he said, he made his point. Just watch him next R.D. Contest.

Amongst the large number of new members this month was one, Rex Moncur, VK3OB. Although Rex has been in the club for some time, Ham Radio has had to take a back seat until studies were over. Come to think of it, Ray Moncur has been in the club for some years. What about it Phyl?

When I left the meeting, there was still quite a gathering around Jim's display of equipment. Hope he got it all home safely.

COUNCIL MEETING

October Council meeting had only one absentee, although two members present should by rights have been home and tucked in their coils. One good thing about having invalids in attendance was the fact that only urgent matters were dealt with, thus making a very early night of it.

Summarising the evening, Eric Trebilcock's interesting report for a week or two of the QSL Bureau will operate from 48 Victoria Parade from 1st Nov. until 14th Dec. Noel 3M will be the challenger for the post of Moorabbin Club, arrangements will be made for the State Field Day Trophy to be incribed with the winner's name each year.

The poor condition of the Vetsville duplicator at 3W1 was discussed. After reviewing the cost of repairs Council decided to replace both.

Field Day rules were reviewed. Anomalies in the present rules have been drawn to Council's attention by several people. Council is taking this matter up through the proper channels.

Only four names were submitted for membership this month, the lowest for a long

time. These names will be submitted to next general meeting for approval. The meeting closed at 10.15 p.m.

GENERAL

The most important event for the month was the W.I.C.E.N. Exercise. As is now well known, for the purpose of this Exercise, the Institute set up a communication network between the Shell two-day car trial. 3W1 operated as station, using 20 mks, 2 mks a.m. and 2 mks p.m. There was also a 5 mks link from 24AL to 3W1, piping in 80 mks signals. This proved most useful as after 80 mks reception was impossible at 3W1 in the early stages, but as the exercise progressed, the signal improved, it but after a couple of hours, things showed a big improvement. Although I do not know the exact number participating in this Exercise, it was only a small percentage of members.

Those who volunteered for W.I.C.E.N., but whose services were not used this time will appreciate that for an exercise of this type only a limited number can be used. Although it is wrong to single out any persons for praise in a job like this, my vote goes to the coffee makers, followed very closely by a vote for

Whist those of us who participated feel the results were very good, we know we had many faults, and realise there is room for improvement. For the person who is getting as many participants as possible to an informal meeting to critically review the event so we can do it next time.

By now, some secretaries should have their new maps showing zone boundaries. It is possible that cases will arise where there is some doubt as to which zone a member belongs. In this event Council will be the arbitrator. There has been one minor alteration. The border between the North Eastern and Eastern Zones has been shifted to bring Arthur 24UL into the North Eastern Zone. This was easier than shifting Arthur!

Pray tell me, does the VKS scribe have a persecution complex? I thought I would need him—much. His wife won't let him play with the VK4 boys, but I warn him here my advice is to let him play rough, as for his warning, well I have friends in high places, too. Not only do I list the editor amongst my personal friends but I am a whole committee, plus members of F.E. and the VKS Council. Before leaving the matter (for this month), had a visit from an old friend from VK3 last week and brought a recent newspaper cutting about snakes in Adelaide. Bet that bruises 3PBs.

Borry to have to report that Bill 3TX is on the sick list. He has had a heart attack and will be confined to bed for a while. We all wish him speedy and complete recovery.

W.I.C.E.N. MEETING

An informal meeting of those who participated in the recent exercise has been held.

W.L.A., VICTORIAN DIVISION

STATE CONVENTION

will be held at
BALLARAT
during the week-end of

**SATURDAY, 3rd NOV, and
SUNDAY, 4th NOV, 1962**

Sunday, 4th November, meeting points —
10.00 a.m. — VK311 Studios, Walker St.
10.30 a.m. — VK3HVS's QTH, Walker St.
11.00 a.m. — Ballarat, Ballarat Hill, Ballarat towers on the hill, Ballarat North
11.30 a.m. — White Swan Reservoir Reserve

Proceed out Humphrey St, North, turn left at "White Swan" sign post—drive to large "W" sign—sign post—W.L.A. signs all the way

Bring the family and picnic lunch. Hot water and barbecue facilities available. For more info, see Runt's 24W, 24W and s.b. events, Competitions, Novelties, all with good prizes. Don't miss it!

Approximately 30 attended—including Mr. and Mrs. 3KU. Apologies were received from 3ZEO, 3LW and 3OKM. Unfortunately a couple of operators have not returned their message forms, so exact number of messages handled is not as yet known. Estimates place the total at 134. Of which nearly 100 went through 3WL. Having got the back slapping over, the meeting settled down to the task of strict self criticism. The fully in production equipment was faulted. The outcome was that a sub-committee will be formed to analyse the points raised and find ways of means of preventing the same faults happening again.

The whole thing was beautifully summarised by Fred 3YS when he said it was up to us all to do things right. We must accept and further, whether we like it or not, use the N.A.T.O. phonetic alphabet.

Two facts have come out of the meeting which are of most interest to those who have volunteered for W.I.C.E.N. There is a definite place in the over-all programme for the Amateurs, and they must have equipment capable of operation from batteries or other emergency power supplies. The a.c. mains are not for W.I.C.E.N. operators.

EASTERN ZONE

Jack 3AJK, of Moie, is now very active on 14 Mc. Since being back on, he has worked over 15 countries. Jack is constructing a 40 ft. tower to house his 100 watt and higher. David 3DY was temporary off the air as he moved QTH in Maffra to 8 Kent Street (ten miles from his home). He is now back and was successful in passing Morse, so awaits his new call sign. Ken 3ZKN is also sitting for the next exam. The Zone wishes you a successful start in the 1st element exam during the "blow" in the last week of Sept., and has now a 8 element yagi temporary.

Grade 4 QSO Group will be 10 months overcast took during the first week in October. No inter-high school hook-up took place from 3AWL during Sept. hook-up to exams. October hook-up took place on 24th. Several young members participated in the Scout Jamboree, namely 3AHE (Traralgon) and 3KCN, 3JB, 3TK and 3ZDR. The Zone will hold its second (summer) family field day at Lakes Entrance later in the year. How about more stations joining in the new early Sunday morning hook-up 73, 3ZCG.

MIDLANDS ZONE

My activities for the most part of Sept. were confined to my travels to VK3, VK4 and back. The only radio activity were a few DX contacts on 33 and 30 mcs. The last week of month, there was however plenty of activity within the Zone itself, details of which were supplied to me by Jim 3SV.

Zone members participating in Zone activities are 3SV, 3AER, 3ZK, 3KQ, 3AHS, 3ED and 3AQUP (congrats to you Ian on having received your call, and welcome to the Ham fraternity). John 3OR called in with information on disposals. 3OKM and 3UT also paid us the courtesy of calling in to the hook-up.

3OR has offered to loan a dope of all circuitry disposals equipment at his disposal, also 3ED can supply 12 circuit photo-stats, thanks fellows. Who else can offer assistance? Please let me have more information on ART may be obtained from 3ZIK who, by the way, appears to be the only one active on 3 mcs. DX and 3 mcs. hook-ups still take place each Thursday at 8 p.m.

Not much heard from Co! 3FO, perhaps the Junior on has him occupied. 3SV participated in the W.I.C.E.N. exercise and despite the fact that participating in the exercise was a success. Others who participated included 3AER, 3APJ/3WI, and 3KU. Jack 3AWL was also active in Zone activities; what about a big bite, Jack?

Anyone wanting to do a frequency check within the Zone should contact me as we have a BC221 frequency meter available. What the fact that I have a packet transceiver, what are any offers? Until such a piece is procured special arrangements will have to be made for transfer of this instrument as required by members.

Before closing the notes for this month, I would like, on behalf of the members of the Zone, to express our sincere sympathy to R. Giddings and D. Briggs at their recent bereavements. 73, 3ND.

NORTH EASTERN ZONE

3AAQ packed his gear and toted it away a few weeks ago, preparatory to transferring his site to the Octopus. 3AAQ is now busy limbering up his wrist in preparation for the slow Morse transmissions he will make later in October. Heard him ordering 2 1/2 dozen eggs

Insulators and hundreds of feet of aerial wire the other day. Actually he is going to build himself a brand new quad, supersede the present ZL Special (modified). This move came about from a joint contact he and 3AOG had with the same TR station. Allan was unimpressed down on Bore's quad design. 3ALP still suffers from inertia, but I understand he is calling a "working bee" shortly. 3ACD believes he may be causing T.V. on 80 mcs. He has repaired his rotating gear box.

The earlier reported gear stripping was due to mis-alignment 3APP getting into of thrills from 1 mhz and his infectious enthusiasm has induced 3AWT and 3AL to join in the daily net at 1130 p.m. I note 3APP advertised for a vidicon tube in Oct. "A.R." I wonder what plans, ideas and local new ideas. The Melbourne Cup is not the only place wherein dash horses run.

3AUL, 3KU, 3AWT, 3AYD and 3BG took part in the Sept. W.I.C.E.N. exercise. I was with 3AYD on the Saturday evening and noted the fenshish look in his eye as he pounced on the five interfering stations and requested them to shift their carriers. As message writer with 3AYD, I was really scratching to keep up with the high speed dictation some of the stations gave. However, we managed.

Jamboree-on-the-Air in the Shepparton area, eight stations have kindly consented to have Scout guests along for this event. By breaking up the event into five periods, we have been able to attract a big crowd. 3LW and 3ZK visited the seven local Groups and spoke to boys to give ideas on conversation pieces such as hobbies, hobbies and local new ideas. I urged them to tune 40 and 80 mhz on their home rx's to tune their ears to poor conditions. The move is offered as suggestions to winter Amateurs. Some have now become tongue-tied when a mike is placed before them.

3ZG and 3ZG well. 3ASY should be on the air by mid Oct. His biggest trouble has been the fabrication of cases and chassis to suit. What an expensive range available on the commercial market. Some have even got copper hammerstone pressure packed paint; it's the berries, though a bit expensive.

Zone hook-ups have not been too well attended in late Sept. and the fellows are critical of lack of interest in them. I wonder if the absentees were not so modest that it is dog in the manger. We must make it more interesting by letting others know what they have been doing. 73, 3ASY.

QUEENSLAND

INTRASTATE CONTEST

The first intrastate contest conducted in VK4 land for ages was held very successfully on the week-end of Sept. 22 and 23. The work put into organising the contest by the Divisional Council was surprisingly rewarded for an estimated 40 to 50 Amateur Stations were on the air in the two periods, six hours on Saturday afternoon and six hours on Sunday morning. The CQ Sunshine State Contest was certainly a good follow-up for all the VK4 boys who came on the air during the R.D. contest. It is planned to have a similar state event, but Council members need your suggestions still on how arrangements can be improved. Write to Council yourself.

GENERAL MEETING

The Sept. general meeting on the 28th of the month was held at a C. M. Weller, 4CZ, At the invitation of C. M. Weller, 4CZ, members gathered at the Tennyson power house to hold both the meeting and to inspect the station, the most modern in VK4. As could be expected, such an attraction drew a good roll-up of 58. The meeting of just 7 1/2 minutes duration, accepted the Council report and elected 17 new members: full: VK3 4WC, 4WB, 4RX, 4LD, 4BL and 4ZGM; associate: H. Kropp, L. Sharpley, B. Taylor, J. W. Taylor, J. W. Taylor, J. W. Taylor, R. Caldwell, W. Harley, W. C. Fall, and J. A. WyeatD.

In case VK4 members have not been keeping up with the news or bothering to read "QTC", Council wanted to find the feeling on the membership of a possible permanent move to VK4. The Council is a referendum but only a little over 30 per cent. recorded their preference, so another call had to be made. The referendum was held on the time you read this. It's possible a decision could have been made, and if this decision is not your wish, then if you did not cast your preference, you are asked to do so. When Council calls for opinions in the future, all members should do their best to make a reply.

RAEAGAA CONVENTION

Oh, didn't Queensland faces blush when they saw a particular advertisement in the last issue of "A.R." titled "The Wilde, Ray and Burnett Branch, in conjunction with the Central Qld. Branch and the Bundaberg Radio Club, would hold a Convention at Bundaberg, Queensland, the week-ends of 8 and T. Now Fanny might think we have a lot of rain in VK4 (some parts anyway), but at least the fact is that the RAEAGAA Club is to lay the dust whereas to make a boy is just not possible. Anyhow, about 38 Amateurs managed to get together this time. RAEAGAA came from first hand reports, they had a good time in fine weather. The Convention was held at the same time as the Bundaberg Sugar Festival, the attraction for Amateur from more distant parts.

One plea to the organisers though. These notes will be present to would appreciate some advice beforehand as to the approximate times of scrambles so they can make it their business to be around to give competitors the stations they need to build their totals.

PERSONAL JOTTINGS

The VK4WI station manager, Alf 4OL, has been enjoying his holiday in Queensland and dashing hither and yon up and down the coast looking for the big fish. His mobile has been working well, thanks to the plastic protection of the body by the dealer. 4OL and 4LZ have been taking quite a bit at good strength. Jim 4LZ is another whose mobile has been heard. Fanny has been taking a lot of time to get away, the new voice at 4WI was Vince 4VI. It's no wonder he put out a great signal from a boat at the top of a telegraph pole which appears to be about 50 ft. high.

Up Mundubbers way, Herb 4KM has spent most of his time watching a lotted up oned-metre mobile but when transmission ceased one night, he managed to race across the Dands looking for the American astronaut.

Don 4JG has been busy with the beginning of the month for a trip to ZL land. George 4GG, who visited the country years back, is now waiting the chance for some good long hauls. Don 4JG has been taking a lot of time to get away, the new voice at 4WI was Vince 4VI. It's no wonder he put out a great signal from a boat at the top of a telegraph pole which appears to be about 50 ft. high.

Country members are still trying to play hide and seek with news of what goes on in their areas. Despite frequent requests for reports, they are slow to come. 4OL and 4LZ are in "A.R." Bulletins of news should be able to inform members of what is going on in their areas. Don 4JG has been taking a lot of time to get away, the new voice at 4WI was Vince 4VI. It's no wonder he put out a great signal from a boat at the top of a telegraph pole which appears to be about 50 ft. high.

SOUTH COAST

Some months ago, the sub-editor or the "Printer's Devil" managed to insert in these notes that a little boy named Fanny was being built by Bill 4WS, whilst wrestling with the installation of a mobile unit. The responsible person must have had, at the time, some prophetic vision of the happening and no material until now. However, it is pleasing to report the sky is again blue on the Gold Coast as the boy is now being built.

Last month it was reported that an ex-W Amateur had settled on the coast. I had the pleasure of meeting in person W. Dax, ex-W3 and ex-W4, and was very glad to see him. A couple of rx's and a few bits and pieces. This may be enough to arouse interest in him. He is now again working the QRX and also becoming a member.

These notes are being penned from Woody Point at the start of the Sunshine State whilst the members of the Barga Convention are just as they are being read, I feel sure I will be reporting a very successful day as the boys are very keen. Very keen indeed. I have a very young man, very young indeed, who has been very keen indeed. I have a very young man, very young indeed, who has been very keen indeed. I have a very young man, very young indeed, who has been very keen indeed.

TOWNSVILLE AND DISTRICT

At the Burdekin and District monthly meeting on the 28th of the month, the senior lecturer in physics at the New University, He gave a discourse on v.h.f. signals on the Queensland coast. He was very interesting and mainly enjoyed same and believe he has also asked some of the local boys for a look at their log books for relevant openings to the notes. He was very interesting and mainly enjoyed same and believe he has also asked some of the local boys for a look at their log books for relevant openings to the notes. He was very interesting and mainly enjoyed same and believe he has also asked some of the local boys for a look at their log books for relevant openings to the notes.

Other news from these reports that Dale ZDG is in the big smoke learning to fix the one-eyed monster in two or three easy lessons. ADJ is going to Christmas Island with a VK3 call sign, maybe will get a new one if he breaks through as he has promised the boys a call of confessions are right. Obviously why one of the local boys always does so good in the R.D. Contest until I broke the car suddenly and cast my eyes over the antenna even over our own shoulders in neighbor's yard. I'll defy a bird to get at the garden underneath unless it is the small bat equipped with a super beam.

Heaven missed Bob's (4TK) voice on the air. I find out that he has started a local A.C.C.P. class and has 16 triers, just so that we would have someone speak into local conditions are so bad. Visitor to the shack was Merv. 4ZMD from out in the far west where all the dust storms originate. Also Bill 4SW was in town, only heard him mobile, too busy sight-seeing to call. Wally 4RU and two Z boys—4ZBE and 4ZDM—have broken their old jobs and are on the band wagon with regards to tv and electronics. Good luck to you all in the new venture.

Ere these notes appear, we will be visited by club and friend and first Secretary of the W.A. Club, Fred 4GH, who has promised to look up all the old gang and see if they can still degus the 80's. What has happened to you, Fred? I hope you are still in the W.I.A. news on a Sunday on 1432. Don't your receivers have a h.t.o. for c.w. to copy Jim as he has been in the news for some time you on Sundays just as soon as the news finishes.

The local Club had their yearly Picnic last Sunday and to the present go on to see how it went. Never takes on shift work—every day is the same. Claude 4UX blew in yesterday through the night with his wind and left Jess at home. How mean can you get? After I had got the eats ready for afternoon tea, 73, 4RW.

SOUTH AUSTRALIA

The monthly general meeting of the VKS Division for Sept. was held as usual in the clubrooms to a little below average attendance, in fact for the first time of late there was no meeting for anybody. The guest speaker for the night was Mr. G. Taylor (2BCQ), who discussed "Civil Defence" and a number of those who stayed home in the mistaken belief that such a subject would have no appeal to them, did not realise just what they would miss. Once again our worthy President, John 4RM, with his usual touch of Solomon, decided in view of the fact that there would be very little business to transact, to hold the business side of the meeting first and get it quickly out of the way. However, this time his Solomon act fell down badly because the members felt a bit talkative and buried their way through the night until their vocal apparatus gave out, and after George 5RX had distributed the QSL cards, and short "Smoke" the paragon, the stage was set for Geoff to take over.

Speaking personally, and I feel also for quite a number of those present, I did not feel that his subject, Civil Defence, would have much appeal for me, and that is where the second Solomon act fell down for the night, because I can remember with a pride that his talk will rank with any previous one for commonsense, interest, and a sensible approach to something that all of us should have woken up to long ago. Apparently Geoff was a wake-up to the fact that a fair number of his audience would be lukewarm on his proposed subject, because he tackled it from a semi-humorous angle to begin with, slowly dropping this approach as he went on, finishing with a smashing climax, leaving no doubt in the minds of his now interested and somewhat shocked listeners that his subject was really important. Most of the talk was illustrated by figures on the blackboard with a couple of maps thrown in for good measure. I again say without hesitation that Geoff is to be congratulated for the splendid job he did tonight being amply demonstrated by the number of intelligent questions asked at his conclusion. The vote of thanks, moved by John 4RM, was enthusiastically received and the members present and should have been a good indication to Geoff as to how well his lecture has been received.

A good batch of visitors were present, and among those noticed were Rupe 7RM (ex-5RM), Bob 5ZGT, who has recently, as the Harmonic of Clem 5GL, hit big for harmonic I would be the first to admit, and there was also a fine strapping example of a VK3 in Doug 8RY, but in view of the fact that he kept looking sideways at me, I am

forced to the unfortunate conclusion that someone had been blowing down his ear! All in all, a good time was had by all, and the evening closed at the witching hour of 11.15 p.m.

Rupe 7RM, (ex-5RM) was a welcome visitor to the general meeting this month. Everyone who renewed their acquaintance with him commented on how well he is looking, and also how well he is carrying on the battle with Father Time. He looks twenty years younger than he really is, no kidding. GIBERT 5GX was conspicuous by his absence from the meeting, and I believe he has been spending little time in hospital with some repairs to his foot. Hope all is well now, OM. I missed the twinkle in your eye when I usually say "Good evening, Gid." I mean, "Gilbert!"

Leith 5LG thoroughly enjoyed himself at the meeting, especially during the business section. He brought up the matter of giving the Z boys an opportunity of participating a little easier in the R.D. Contest, and was overjoyed when it created quite a lot of discussion. Not that anyone was against this suggestion, but a number of side issues were brought in and Leith had the time of his life mulling into his beard and glaring at anybody who attempted to introduce the topic of c.w. versus phone on the matter.

Funny how one bumps into little interesting sidelights concerning fellow Amateurs in the most unexpected places. My wife was at the dressmaker's the other day, and arising from probing the dressmaker got the cat out of the bag that her sister used to accompany Jim 5JR on the plane. My wife told me of this and immediately I got my nose on the trail and what do you think Jim used to play? The clarinet. What a fox he turned out to be, a Jimmy Dorey in our midst and hiding his light under the proverbial bushel. Tut-tut, too-look and a couple of semi-quavers.

Jack ELR has been home from work for the past eight weeks battling firstly with some bronchial trouble and then down with the "wags". At the time of writing he is still not the best, but is slowly on the improve. Ray 5DA—"Back to you—paid Jack a visit and appears to be sparking on all six, or is it eight? Like a lot of us, he has woken up that providing we remember our age, all will be well, even though we do get a reminder now and again.

Last month I referred to the "Lika New Mixer Circuit" in the June issue, and it is remarkable how many of the boys at the meeting went out of their way to let me know that they agreed with all I said. Once again may I compliment the "Mag" on the reprint, and may I also ask if they have anything along the lines of an oscillator using a twin triode which could feed into the said mixer. If the Publications Committee desire it, I will forward my request accompanied with the 10000000000 signatures of request.

The position of the official station SWI has altered somewhat these days. 7 Mc. has been the regular listening band for the season for many, many years, but these days this band is almost out for the season and 3.5 Mc. is giving by far the best results. Which leads me to say that the boys who are handing the various re-broadcasts deserve a pat on the back for the good work they are doing, even if nobody gets round to doing the pat!

Fred 5MA recently spent a few days in the Berri Hospital and was so delighted with the treatment he received that he donated his appendix to the said hospital, hope all is well now. Fred quite a gathering at the recent wedding of Hughie's (5SDC) daughter Marge to Dale 5VV at Renmark, so much so that someone was prompted to ask is it a Ham Radio gathering? Our congrats to the happy couple, and I feel that I should give my well known

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fact, special congratulations came from the P.M.C. Depart's Radio Branch, complimenting everybody on the high standard of operating and the organisation in general.

After having successfully confused everybody about the date for the 40 mX scramble, when three different dates were quoted in the Bulletin, it was decided to postpone it for one week. Conditions were patchy and consequently the success of the contest was as they should have been. Winners to be announced at the Xmas 'do'.

Something seems to have happened to my organisation during this month. I think it's something to do with the fact that I forgot to ask them for a report until it was too late. I shall have to be extra on my network will be blown up hill 73, 81S.

TASMANIA

Alan TMY has taken a considerable part of his property at Cremorne and, at least temporarily, is a man of leisure. You certainly deserve a rest after working so hard for such long hours. Alan, we hope to hear you more often on the bands now, too. Pat TGV spent a holiday recently in Melbourne, and returned home with an ARF 73 and a lot of equipment he saw but did not buy, for lack of money, so he says. Jack 7JB is again heard on the bands, particularly 80 mX. Apparently there were a few other 80 mXers over Jack, as it has over several other southern members, with the result that excellent roundups are to be found on 80 mX almost every night.

The club room fund-raising committee added £11/8 to the fund as a result of the function held on 20th Sept. This result was most surprising in view of the rather disappointing number attending the function. However, it is true to say that those at the function thoroughly enjoyed themselves.

John 7JF is in the course of building up a 150w. rig, and I understand that Den 7DK is also assisting John in this, and that Den fears that John will reach the D.J.C.C. first.

The Jamboree-on-the-Air was held on 30th and 31st October. Eighteen VK7 stations at least took part. I urge you to forward a copy of your Jamboree log to the Secretary of the Boy Scouts' Association in Hobart so that a full record of participation can be gained. The boys taking part at your station will also receive a participation certificate, and QSL cards will be sent to stations by your station.

At the October Divisional meeting we were very acceptably addressed by Mr. John Greenhill, of the Physics Department of the University on telemetry from balloons. Great interest was shown in the transmitting gear exhibited and many were the envious eyes turned on the mass of transistors to be found therein. The excellence of the address could be gauged by the attention paid by all present to the lecturer.

Michael 7ZAY has recently gained his private pilot's licence flying with the aero club from Cambridge airport. I wonder if we can expect some airborn v.h.f. activity? Den 7DK is gradually evolving a mobile tx of considerable merit, and his success in designing and building a centre loader which has been amply demonstrated by his working 1AWZ, also mobile, near Newcastle.

Remember the tx hunt on 11th Nov. Be in it and have fun as well as making the function all the more worthwhile for the others taking part. Charlie 7KS is in the process of building a rig for the 2200 m, and in the final. Terry 7CT has been playing around with improving the percentage of modulation in his mobile rig and results have been encouraging.

The v.h.f. boys have decided upon a standard calling frequency of 144.1 Mc. and crystals for this frequency are being obtained in bulk to cut down the price for same individually.

It is hoped to hold a Ham Fest on the week-end of Saturday, 31st Nov. in the neighbourhood of Campbelltown. This site has been chosen as a compromise, to suit participants from all three zones, so we hope that you will attend, together with your XYL and family and make this venture an outstanding success. Details will be fully set out in the Divisional Bulletin, 73, 72Z.

NORTHERN ZONE

For the first time in several years a Zone meeting was held at a place other than a member's home and our Sept. meeting, in our new meeting rooms, proved beyond all doubt that the upsurge in attendance will take place through this change.

As yet no chairs have been provided and members arrived carrying seats of all shapes, sizes and styles. One member was noted perched on the window sill and another had to sit on the floor. Evidently one of our officers expected an over flow and left a chair outside the front door. A later check established the fact that it was an unnecessary precaution. There wasn't an overflow—in fact there wasn't even 2 chairs.

After the business of the evening was concluded 7DK gave an interesting lecture on "Remote Control".

The Jamboree-on-the-Air was also discussed and it is hoped that a station will have been established at a camp site.

A monster Field Day is also being considered and all the best on 144 Mc. increased activity should be evident in the Zone before the next 144 Mc. DX season closes.

The November meeting will be held in the new meeting room, 73 George St., Launceston, on Friday, 9th November. So keep this night free, 73, 71Z.

NORTH WESTERN ZONE

The meeting on Tuesday night was not well attended. Ulverston not being represented at all. It was suggested that the meetings could possibly be held in other centres, both to stimulate interest in Ham doings and to reduce expenditure, as our funds are low.

Some concern has been felt at the way in which our DX efforts have been handled. The Northern Zone, seems to have been ignored by the Southern Zone. North and North-Western operators experience great difficulty in contacting the South, even during the round-up after the broadcast (when we can hear it). We hear them but cannot contact them! More co-operation in general is needed, the proposed Field Day at Campbelltown may be a step in the right direction.

I hope Dennis 7DK has his house upright again. Max 7TV has narrowed his operating width. Steam your rig up Bob, because I'm looking for you on 144 Mc. 73, 72B.

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